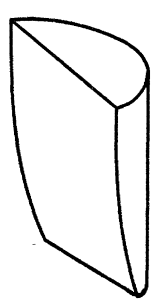
to other optical questions. The various circulars which issued from the The Scientific Shop were always his own, and those who have had the pleasure of reading them will recognize that they are unique in accurate scholarship, in instructiveness and in absolute candor.

No account, however brief, of Mr. Porter's work would be fair, not to say adequate, which did not include some reference to his several large volumes of manuscript "notes," in which he was in the habit of recording new ideas and experimental results. A single citation which will serve to illustrate the cleverness, ingenuity and skill of the man may also be of value to makers of lenses. It is a note, referring to an extension of the benefits of the bifocal lens invented by Benjamin Franklin and having interest as being the last problem upon which he was engaged, and is as follows:

MULTIFOCAL SPECTACLE LENS

Intended to replace the bifocal lens. Would have two advantages (1) "invisibility" in the sense of not being evidently different from a single focus lens and (2) the multifocal property should give clear vision at any distance from (say) 10 inches to infinity.



One face of the lens is curved only in the horizontal plane and the other only in the vertical plane, the radii of each surface growing shorter from top to bottom of the lens in about the same ratio. Thus one surface may be a circular cone and the other a spiral cylinder. The curvatures need not increase uniformly from top to bottom, but the increase should be at the same rate on each side so as not to introduce cylindrical error. Vertical or horizontal astigmatism can be corrected by making one surface of uniformly greater curvature than the other. The surface may be mechanically ground and polished by simple mechanism. Angular astigmatism can possibly be corrected by a superposition of curves, but the surface would not then be "ruled," and the polishing operation might be less certain.

The fault of the lens is that the curvatures and foci are different at top and bottom of the eye. This difference is, however, slight in a large lens, and unless presbyopia is great may not be enough to cause inconvenience.

A. B. P.

August 17, 1907

Under date of January 24, 1909, occurs a two-page note describing in detail a method by which the grinding tools for such a multifocal lens may be made. Then the following:

MULTIFOCAL LENSES

Could be made with spherical surfaces by using a glass varying in density (refractive index) from top to bottom. Such a glass could be made by using a flat melting pot heated from above (to avoid convection currents) in which was placed in very thin layers the varying materials needed to give the varying density. A "guard ring" should be put in the center of the melting pot to avoid convection currents due to unequal heating or cooling around the sides of the pot. The glass should be kept in a molten condition long enough for diffusion to make the density gradient uniform, and the heat should be turned off so slowly that the top always remains hotter than the bottom to avoid convection. A. B. P.

February 5, 1909

Hundreds of suggestive "notes" of this type lead one to wish that it might have been possible for a mind so fertile in resources to have devoted its energies to investigation and pure science, unhampered by the daily routine of teaching or commerce.

HENRY CREW

BANQUET IN HONOR OF PROFESSOR BESSEY

THE Botanical Seminar of the University of Nebraska gave on June 5 an anniversary banquet in honor of Charles Edwin Bessey, to celebrate the twenty-fifth anniversary of his professorship in Nebraska, preceded by fourteen years of professorial service at the Iowa Agricultural College. Dr. Roscoe Pound pre-

sided and first introduced Governor A. C. Shallenberger, who spoke on "Twenty-five Years for the State"; other toasts were as follows: "Forty Years for Botany," by Professor Frederic E. Clements; "His Influence as a Teacher," by Dean Henry B. Ward; "What he has done for the University," by Professor George E. Condra, and "His Influence upon the Layman," by Regent George Coupland. There was then presented to Professor Bessey a set of twenty-four volumes containing the publications of his former students.

The *Sunday State Journal* contains the following editorial appreciation: "The honors paid to Dr. Charles E. Bessey last night by the Botanical seminar of the University of Nebraska were richly deserved. Dr. Bessey has just completed forty years of active service as a teacher of botany—fifteen years at Ames and twenty-five years at Lincoln. When it is remembered that during each one of the forty years he has been in close personal contact with hundreds of young people, has fired them with his enthusiasm as a scientist and has influenced them with his beautiful and simple character—when all this is understood, the value of his career to the public becomes deeply impressive. It has been a source of pride and joy to the university that a man of international fame should decline flattering offers and large salaries to go elsewhere and should devote himself with unflagging zeal to the study of botany here in Nebraska. To the words of appreciation spoken last night the whole state joins in proud and spontaneous applause."

BRITISH ASSOCIATION TRIP TO ALASKA

A NUMBER of members of the British Association having written expressing their desire to go up the coast, arrangements have been made as below. It is desirable for members who wish to take this delightful trip to go before the association meets at Winnipeg, as the weather is often damp and the views obscured by mists during the latter part of September. Some of the members are coming through Asia, and others through Canada and the States before the meeting at Winnipeg, but as the times of arrival of those parties vary, it has been found advisable to encourage them to travel in weekly companies, leaving Victoria at 11 P.M. on Fridays or Vancouver at 11 P.M. on Saturdays between July 16 and August 13 and again on September 10 for each of the undermentioned coast tours by the C. P. R. steamships, which also leave Seattle one day earlier than the above dates at the same through fares.

a. To Prince Rupert, Juneau (Great Gold Mine), Taku and other large glaciers, Skagway, and thence back to Vancouver in nine days, or to Victoria in ten days, traveling nearly 2,000 miles through enchanting scenery along sheltered "fiords." Cost, including meals and berths, $66.

b. Including the above to Skagway, thence over the wonderful scenery of the White Pass Railway and down the Yukon River to Dawson (Klondike) and back. Time, about three weeks. Cost, $160.

Beyond the latter those who have time and desire to go through Alaska round by Nome can do so at reasonable rates. Ordinary travelers' clothing suffices, with thick boots or rubber shoes for climbing. Arrangements are being made to entertain members during their stay at Victoria.

THE CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING AND THE GEORGE WASHINGTON UNIVERSITY

THE following letter has been addressed by the president of the Carnegie Foundation for the Advancement of Teaching to the president of the George Washington University:

June 4, 1909.

PRESIDENT CHARLES W. NEEDHAM,
The George Washington University,
Washington, D. C.

Dear Sir:—I am directed by the executive committee of the Carnegie Foundation for the Advancement of Teaching to send to you as president of the George Washington University the following communication.

The George Washington University reported to the Foundation a productive endowment of $219,832.96 as of date August 21, 1907. In the financial statement submitted some time since it reported as of date October 3, 1908, a productive endowment of $123,500.

The rules of the Carnegie Foundation require that an institution, to be entitled to the privileges of the retiring allowance system, must have